

CritiCool®

Cooling with Care



The Non-Invasive Approach to Cooling Therapy



Cooling Therapy for Tissue Protection

Neuro-protection by hypothermia has taken a giant step into the future. Today, cooling therapy is used for various indications following the process of ischemia. The protective effects of hypothermia are due to:

- Reduction of cerebral metabolism, oxygen consumption and glucose demand
- Slowing of the destructive neuroexcitatory process
- Decrease of free radical production
- Stabilization of the blood-brain-barrier
- Reduction of the inflammatory process



Clinical Studies Show that **Cooling** Improves Neurological Outcome and Reduces Mortality

Cardiac Arrest – Hypothermia has become routine practice in medical centers worldwide, after it has been proved in many clinical trials that Hypothermia improves neurological & functional outcome and reduces mortality in patients that suffered from VF. ^{1,2} Today, ILCOR and AHA recommend use of therapeutic hypothermia for patients after cardiac arrest. ³

Traumatic Brain Injury (TBI) – Studies have shown that hypothermia induction results in improved patient outcome by significantly reducing ICP and limiting secondary brain injury after severe head trauma. ⁴

Birth Asphyxia and Ischemic Encephalopathy – there is now evidence from multicenter randomized trials that induced hypothermia can significantly improve survival and improve neurodevelopmental outcomes without severe disability of infants with Hypoxic Ischemic Encephalopathy (HIE). ⁵ The European Guidelines for Resuscitation state that "newly born infants born at term or near-term with evolving moderate to severe hypoxic-ischemic encephalopathy should, where possible, be offered therapeutic hypothermia" thus making this treatment standard of care for this indication. ⁶

References:

1. N Engl J Med. 2002; 346(8):549-56; 2. N Engl J Med. 2002; 346(8):557-63 3. Circulation. 2003; 108:118-121.
4. CJEM. 2010;12(4):355-64. 5. N Engl J Med. 2009; 361(14):1349-58 6. Resuscitation 2010; 81:1389-1399

The Optimal Solution for Cooling Therapy

Introducing CritiCool® - The Non-Invasive Approach to Cooling Therapy

With **CritiCool®**, cooling is your therapy of choice. Set the controller to the desired temperature, apply the *oCure Wrap* garment and commence treatment. Simply SET, WRAP & COOL!

Using feedback from the patient's core and skin temperature sensors, the proprietary control algorithm responds to any temperature change. Following the cooling phase of treatment, **CritiCool®** precisely re-warms the patient to normothermia.



High heat exchange by 3-dimensional surface coverage

Our flexible single piece *oCure Wrap*, provides three-dimensional surface coverage that maximizes energy transfer. This breakthrough technology provides effective induction and maintenance of cooling.

Precise control of patient core temperature

CritiCool® offers precise cooling to programmed target temperature, by applying a temperature control algorithm. Continuous temperature feedback enables system self-regulation. Adjustment and monitoring temperature is automatic, therefore, significantly reducing staff time and labor.

Convenient and Easy to use

Patient cooling is achieved in three steps:

Set, Wrap & Cool.

- **Set** Intuitive user interface
- **Wrap** User friendly *oCure Wrap*
Quick patient application
Simple and convenient patient care
- **Cool** Automatic and precise patient temperature control

Controlled and Gradual

Controlled re-warming is an important step of any Hypothermia treatment in order to significantly reduce a rebound increase in Intracranial Pressure. **CritiCool®** actively controls the process of re-warming and achieves a gradual increase in temperature.

CritiCool® is the optimal solution for early initiation of cooling therapy within minutes upon patient arrival.

Hypothermia after cardiac arrest

